



**STEEL
INSURES
STRENGTH
AND
SECURITY**



FABRICATED STRUCTURAL STEEL

Steel to Strengthen National Capitol, Washington

**AMERICAN INSTITUTE
OF STEEL CONSTRUCTION, INC.**

101 PARK AVENUE, NEW YORK 17, N. Y.



The AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.

is a membership corporation representing the structural steel fabricating industry of the United States. It was organized in 1921 and incorporated under the laws of the State of New York in 1925. Among its members are more than 244 of the nation's largest and most responsible concerns which normally fabricate and erect more than 85 per cent of the country's annual tonnage for buildings, bridges, and other steel structures. Supported entirely by membership dues, it is a non-profit service organization, which all qualified fabricators are invited to join.

THE A. I. S. C. PURPOSES

The purposes for which the Institute was organized, and in furthering which its activities are conducted, are:

1. To further better methods—and to eliminate waste—in the design, fabrication, and erection of structural steel through a cooperative effort based upon simplification and standardization.
2. To promote the growth of the fabricated structural steel industry by expanding its possibilities and its markets.
3. To establish and promote standards of ethical business relations and to bring about uniform trade customs and usages within the industry, so that all who deal with the industry may transact their business with a minimum of misunderstanding.
4. To increase the fund of useful engineering knowledge and to promote the science and the art of steel construction through technical research; and to maintain a staff of district engineers to disseminate such information to Architects, Engineers, and Public Officials and to assist them in its application.
5. To collect and disseminate pertinent statistical information so that those engaged in the industry may be able to conduct their business more efficiently.
6. To develop for the industry a better understanding of the elements of cost through the use of the A. I. S. C. standard system of cost accounting.
7. To foster, in general, the improvement of conditions and business relationships within and without the industry.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (RIVETED, BOLTED AND ARC-WELDED CONSTRUCTION)

This Specification defines the practice adopted by the American Institute of Steel Construction in the design, fabrication, and erection of structural steel for Buildings.

ADMINISTRATIVE PROVISIONS

SECTION 1. TYPES OF CONSTRUCTION.

Standard Specification

The A. I. S. C. Standard Specification for the Design, Fabrication and Erection of Structural Steel for Buildings—Riveted, Bolted and Arc-Welded Construction, is generally accepted throughout the United States. The Specification has been revised as of June, 1949. It is included in many municipal building codes by reference.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES

AS ADOPTED 1924
REVISED DECEMBER 1, 1946

THIS DOCUMENT INCLUDES THE A. I. S. C. STANDARD PROPOSAL CONTRACT FORM
AND STANDARD RELEASE AND INDEMNITY AGREEMENT.

SECTION 1. GENERAL.

(a) Scope.

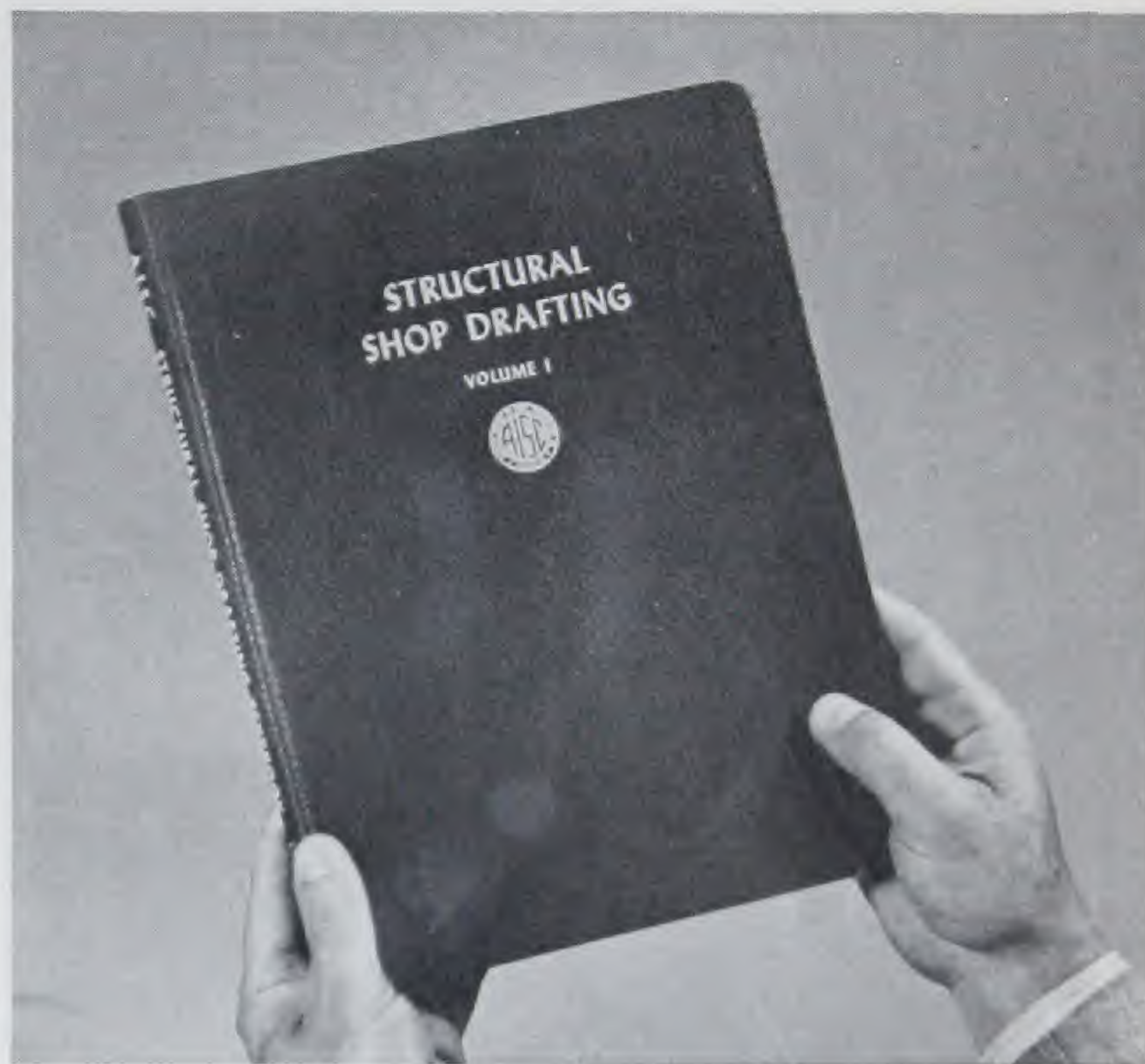
The rules and practices hereinafter defined are adopted by the American Institute of Steel Construction as standard for the industry and shall govern all conditions relating to the use of Class "A" Structural Steel, unless the contract between the Buyer and Seller specifies otherwise.

(b) Design, Fabrication and Erection.

Code of Standard Practice

This Code is the standard guide to approved American practice in all dealings between the purchaser and the fabricator of structural steel for buildings and bridges. It was revised in December, 1946. It is frequently included by reference in a purchase contract, assuring that each party knows in advance what to expect from the other. The Standard Proposal Contract of the A. I. S. C. is printed with it. The architect or engineer is enabled, by use of this standard form, to assure his client that he will receive complete and comparable bids from all fabricators on a contract.

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STANDARD BOOKS FOR STRUCTURAL STEEL DESIGN

STEEL CONSTRUCTION: *Manual of The American Institute of Steel Construction, Inc.*—The Manual of Steel Construction is the acknowledged standard design handbook for structural steel buildings and bridges. It has merited and won universal acceptance in the professions and by local, state and federal government authorities. The first edition appeared in 1927 and the latest revisions were made in 1949. The 432-page book contains authoritative data relating to physical properties of beams, columns, channels, angles and other items used in structural steel design. The Manual also contains complete up-to-date texts of the Code of Standard Practice, Standard Specification and Standard Proposal Contract. The Manual is available with index tabs at \$3.00 or without tabs at \$2.00.

STRUCTURAL SHOP DRAFTING: *A. I. S. C. Textbook, Vol. 1.*—This completely new work, published in

1950, is for use in instructing high school, trade school and college students and beginning draftsmen in the rudiments of the art and practice of structural steel detailing. It is available at \$3.00.



AMERICA BUILDS WITH



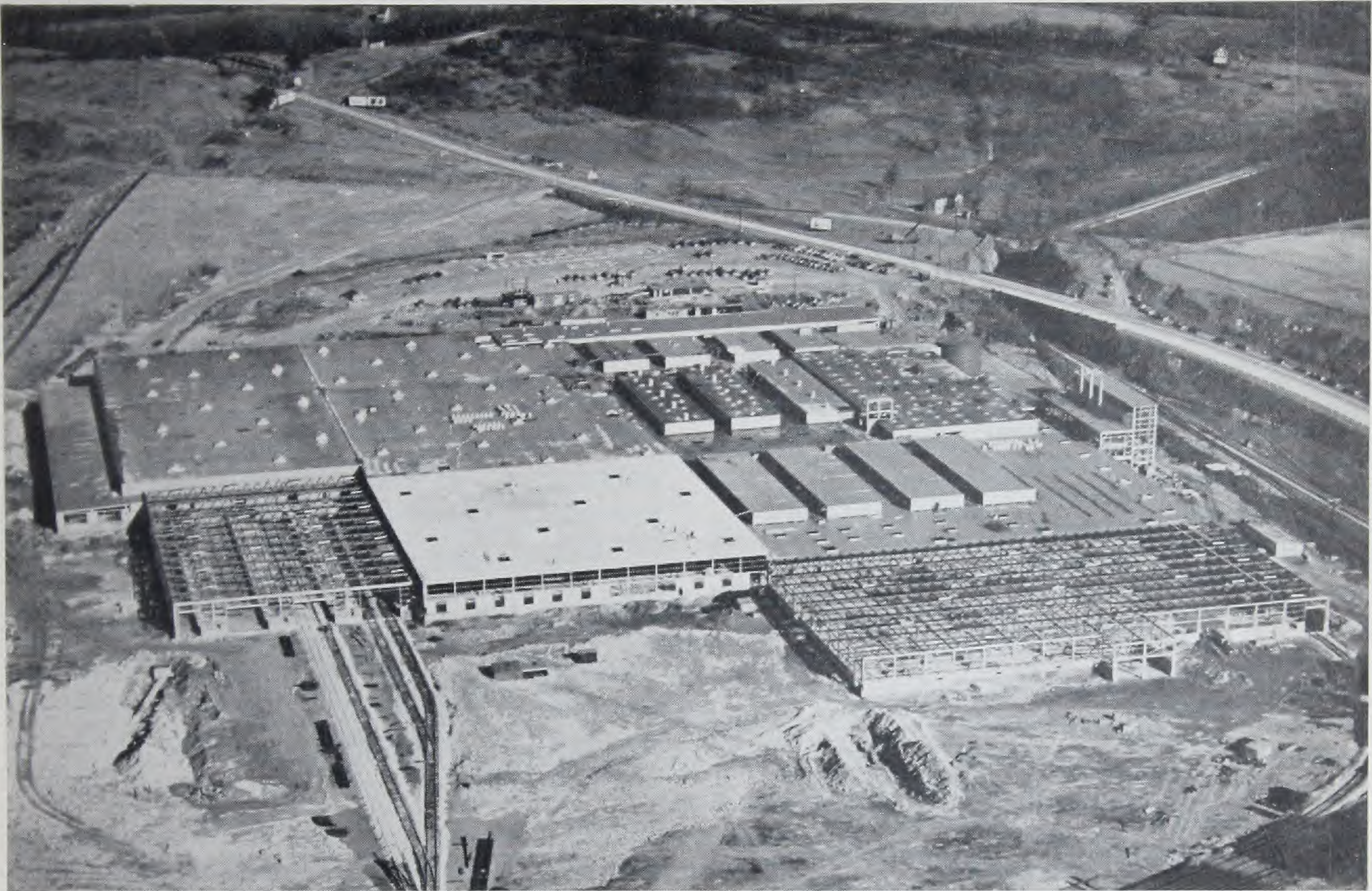
Steel bridge over the Watauga River, Tennessee, recipient of a Class I Prize Bridge Award in A.I.S.C. 1948 annual contest for most beautiful bridges.

Construction of arch for one of three giant steel hangars, International Airport, New York City.



STEEL . . .

AMERICAN INSTITUTE
OF STEEL CONSTRUCTION



Industrial plant with steel frame, for Continental Can Co., Inc., West Mifflin, Pa.

Postwar skyscraper of steel construction at 100 Park Avenue, in Grand Central district, New York City.

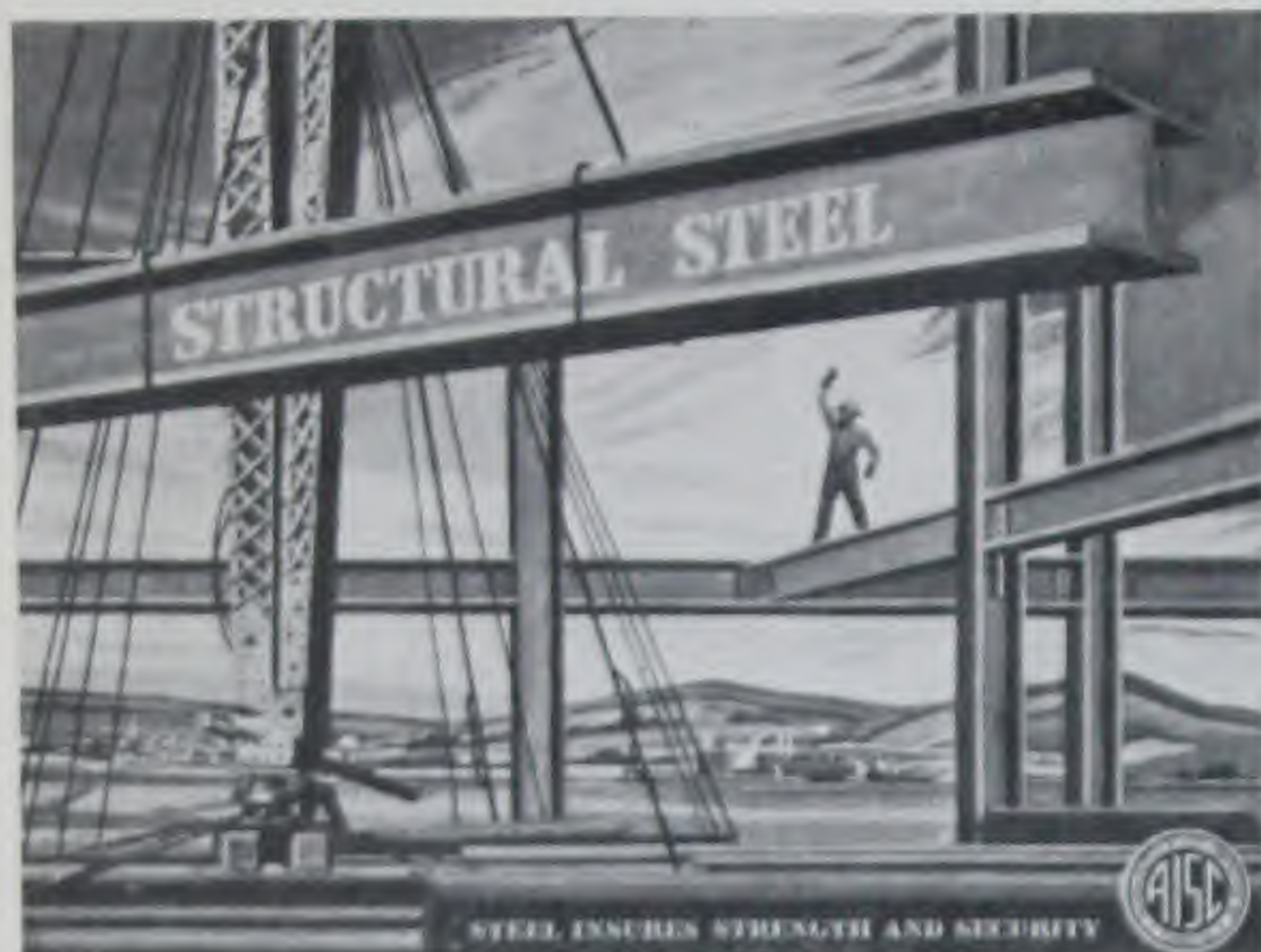


PUBLICATIONS OF THE A.I.S.C.

Get Your Copy Now of

"STRUCTURAL STEEL"

the New 64-Page Book



The comprehensive story of America's great structural steel fabricating industry is available for the first time in book form. Architects, designers, structural engineers and educators are finding "Structural Steel" of daily usefulness. The book, lavishly illustrated and in color, is available without charge to qualified persons. Write on your letterhead to American Institute of Steel Construction, Inc., 101 Park Avenue, New York 17, N. Y., for your free copy.

Other A. I. S. C. publications also may be had on application, without cost except as noted. They are listed on this page.

New Motion Picture

"BUILD WITH STEEL"

16 mm. in Color

For professional and lay audiences, the new motion picture, "Build With Steel," produced for the American Institute of Steel Construction, provides 25 minutes of entertaining background on the fabricated structural steel industry. Informative and educational, the picture relates a warm, human story of father-and-son in the contracting business. At the same time, it presents accurate and authentic information on building techniques. "Build With Steel" has gained wide popularity and is now being circulated throughout the United States and abroad. It is a 16 mm. film, in color and with sound. To obtain "Build With Steel" for free showing at your next group meeting, apply to Film Library, American Institute of Steel Construction, Inc., 101 Park Avenue, New York 17, N. Y.

Other motion pictures, as well as lantern slides and photographs also are available. They deal with the manufacture, fabrication and erection of structural steel in buildings and bridges.

INSTITUTE PUBLICATIONS FOR YOUR USE

- A. Manual of Steel Construction—Regular Edition—\$2.00 postage prepaid; Thumb Indexed Edition—\$3.00, postage prepaid.
- B. Specification for the Design, Fabrication and Erection of Structural Steel for Buildings—Revised June, 1949.
- C. Code of Standard Practice for Steel Buildings and Bridges—Revised December, 1946.
- D. Prize Bridges, 1928-1949—Illustrated booklet.
- E. Requirements for Buildings to Resist Earthquakes.
- F. Static Tests of Riveted Joints—by Jonathan Jones (reprint from Civil Engineering, May, 1940).
- G. Fatigue Provisions in Riveted Joints—by Jonathan Jones, Chief Engineer, Fabricated Steel Construction, Bethlehem Steel Company.
- H. Steel Columns of Rolled Wide Flange Section, Progress Reports No. 1 and No. 2, A.I.S.C. Column Research at Lehigh University—by Bruce Johnston and Lloyd Cheney.
- I. Riveted Semi-Rigid Beam-to-Column Connections, Progress Report No. 1—by Robert A. Hechtman and Bruce G. Johnston.
- J. Engineering Essentials for Welders—by H. Malcolm Priest (reprint from The Welding Journal, April, 1942).
- K. Perforated Cover Plates for Steel Columns—by Ambrose H. Stang and Martin Greenspan, five sections, reprint from Journal of Research, National Bureau of Standards, 1942-1943.
- L. The Effect of Various Fasteners on the Fatigue Strength of a Structural Joint—A Research Report from The Technological Institute, Northwestern University, Evanston, Ill.
- M. Steel Building Code Changes Analyzed—by T. R. Higgins, Director of Engineering, A.I.S.C. (reprint from Engineering News-Record, October 17, 1946).
- N. Single Span Rigid Frames in Steel—by John D. Griffiths.
- O. Grandstand and Stadium Design—by William N. Woodbury.
- P. Textbook of Structural Shop Drafting, Vol. I—\$3.00 postpaid.

MOTION PICTURES, LANTERN SLIDES, AND PHOTOGRAPHS:

For use at engineering society and other meetings, the Institute has available a number of motion pictures, lantern slides, and photographs which show the manufacture, fabrication, and erection of structural steel in buildings and bridges. For information on these and on publications, ask our nearest District Engineering Office or Institute headquarters.

12 GREAT ADVANTAGES IN STEEL CONSTRUCTION

Strength: Steel is the symbol of strength. It is used for the world's great structures because of its ability to withstand enormous pressures and stresses. "Strong as steel" is a well-deserved comparison.

Uniformity: Every process in making steel is supervised and scientifically safeguarded to maintain uniform quality of the highest order.

Endurance: Steel structures are built for the ages. The strength of steel is permanent and does not deteriorate under service loads and stresses.

Toughness: The shock produced by suddenly-applied overloads is more readily resisted by steel than by other structural materials. Steel-frame buildings are built to withstand earthquakes.

Adaptability: Steel-frame buildings lend themselves readily to changes in layout. The interior may be redesigned at will and changes in the framework can be made with relative economy.

Versatility: Because of the great variety of shapes in which structural steel is made as a standard product, it comes handily to the designer's use, no matter what type of structure he is called on to devise.

Fire Safety: Steel will not burn. There are no structures more inherently fire-safe than the modern skyscraper, built with a steel frame.

Compactness: Structural steel provides the maximum amount of usable interior space, with a minimum of obstructions.

Speed: Steel-frame buildings have a record for more rapid construction than any other type of fire-safe structures. Members are fabricated off the site and are delivered ready to be placed in position.

Salvage: Structural steel offers high salvage value with low removal cost. Many steel buildings and bridges have been taken down at the end of their useful lives and the steel in them refabricated for other uses.

Economy: For both small and large structures, steel provides dollars-and-cents savings for the investor and the owner.

Service: Behind every ton of structural steel stands the responsibility of the giant American steel industry, with its research, manufacturing, engineering, design and fabricating experience. The entire industry is committed to a policy of public and customer service.

